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CLASSIFICATION

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REPORT

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CENTRAL INTELLIGENCE AGENCY

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SOURCE

Newspapers and periodicals as indicated.

BIG EXCAVATORS GO TO SOVIET CONSTRUCTION SITES; MULTIPLE-BUCKET MACHINES DIG CABLE, IRRIGATION DITCHES

DRAGLINE HAS 16-MAN CREW -- Kiev, Pravda Ukrainy, 13 Jan 51

built

The new walking dragline, the ESh 14/65at the Sverdlovsk Uralmash Plant is performing highly productive work on the Volga-Don canal project. The machine has a 65-metereling, boom and a 14-cubicmeter bucket which weighs 18 tons. Its operating crew consists of 16 men, with five working each shift. Five crew members have had a higher education; the rest have studied at secondary technical schools.

The machine's productivity is rated at 250 buckets of earth per shift. It is estimated that the dragline is capable of replacing the labor of 7,000 workers.

Moscow, Ogonek, 11 Mar 51

The designating mark of the ESh 14/65 is broken down as follows:

No or Letter

Meaning

E Sh

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14 65

Excavator Walking (Shagayushchiy) Volume of bucket (cu m) Length of boom (m)

Moscow, Literaturnaya Gazeta, 20 Mar 51

The ESh-14/65 walking dragline is powered by 48 electric motors.

BUILD THIRD MODEL OF WALKING EXCAVATOR -- Vil'nyus, Sovetskaya Litva, 25 Mar 51

The Sverdlovsk Uralmash Plant has begun to build a new heavy walking excavator, the third model of this type of machine to be produced. Its capacity will be less than that of former models, the bucket having a volume of 10 cubic

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meters. The boom will be 10 meters longer, however, so that the machine will be able to move out earth to a radius of 75 meters. Other heavy-machine-building enterprises are contributing to the construction of the new machine.

The excavator, scheduled for completion by the second quarter 1951, will be sent to one of the big construction projects. It should have a daily productivity equivalent to that of 6,000 workers.

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MOUNT DIGGING UNIT ON TRACTOR -- Moscow, Mekhanizatsiya Stroitel'stva, Feb 51

This year, the Dmitrov Excavator Plant of the Ministry of Construction and Road-Machine Building put out an experimental model of the new ET-121 ditching machine. Designed for use in laying power and communications cables, the machine consists essentially of a multiple-bucket, chain-drive digging unit, mounted on the rear half of an STZ-NATI tractor.

Because it is mounted on a standard tractor, and has only a small number of extra parts, the cost of the machine is considerably lower than that of other. types, and 60 percent less labor is required for its assembly and the manufacture of parts. Spare parts do not constitute a problem, since the machine can use most of the spare parts for the STZ-NATI tractor. Finally, it is simpler to operate.

The machine was put through tests by an interdepartmental committee, running it in clayey soil of average moisture content. Maximum productivity was 93.6 cubic meters per hour, minimum productivity (working in soil of high moisture content) was 60 cubic meters per hour. It was found that the machine was running at only 35 horsepower during the tests, although it has a rating of 52 horsepower. Possibilities of increasing the machine's productivity in the future are under consideration.

On the basis of tests, the committee recommended the machine for series production, and the plant has accordingly put out its first series of the ET-121.

Specifications are as follows:

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	7,570
Weight (kg)	4,800
Over-all length, bucket frame raised (mm)	2,150
Height in operation (mm)	3,400
Maximum height, in traverse (mm)	
Width, in operation (mm)	2,500
Width in traverse (mm)	2,400
Rated productivity, working continuously (cu m/nr)	90
Dimensions of trenches dug (mm):	1 000
Maximum depth	1,200
Width	500
Motor:	1,250
vo .tions per minute	
norsepower	52
Length of bucket frame (mm)	2,550
Number of buckets	19
Speed of bucket chain (m/sec)	0.75
Volume of buckets (liters)	12
Speed of discharge conveyer belt (m/sec)	2.0
Speed of discharge conveyor bors (m/200)	
Working speed (m/hr):	74-155
Forward (4 speeds)	60
Backward	

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Traversing speed (km/hr): Forward (4 speeds) Backward

3.82-8.04 3.12

CANAL DIGGER DOES WELL ON TESTS -- Moscow, Mekhanizatsiya Stroitel'stva, Mar 51

The Kiev Excavator Plant has built an experimental model of the new EM-161 multiple-bucket transverse excavator. Designed for digging irrigation ditches, it was built according to a plan submitted by the Leningrad Affiliate of the All-Union Scientific-Research Institute for Construction- and Road-Machine Building and designers of the plant.

The machine is mounted on crawlers of adjustable span, the body riding directly on a main crawler, while the second crawler is attached outrigger-fashion to the end of a telescoping tube which houses a transmission shaft. The crawlers can thus move along opposite sides of the irrigation ditch, adjusted to its width. The bucket arm, lowered between the crawlers into the ditch, is adjustable in digging angle and length.

The machine can dig ditches 3.5 meters wide at the top and 1.5 meters wide at the bottom.

At the end of 1950, tests were run on the EM-161 with representatives of the Ministry of Agriculture attending. Working on existing canals, the machine achieved an average productivity of 34 cubic meters per hour, while its average productivity in digging new canals was 29 cubic meters per hour. The over-all performance of the machine was adjudged entirely satisfactory.

Specifications are as follows:

Weight (kg)	8,000
Length of bucket arm, fitted with 16-liter buckets (mm): Maximum Minimum	3,620 3,270
Length of bucket arm, fitted with 8-liter buckets (mm): Maximum Minimum	3,300 3,100
Width of crawlers (mm):	880
Main crawler	. դ40
Secondary crawler	440
Tread (mm):	4,900
Transmission tube extended to maximum	1,750
Transmission tube at minimum	1,170
Over-all dimensions of machine (mm):	6,470
Length	6,325
Maximum width	3,175
Minimum width	3,200
Height	3,200 34
Rated productivity (cu m/hr)	0.6
Speed of bucket chain (m/sec)	0.0
Working speeds (km/hr):	0.172
First speed	0.34
Second speed	1.5
Transport speed (km/hr)	1.,
Motor:	บ-2
Туре	22
Rated horsepower	
Rated revolutions per minute	1,200

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NEW EXCAVATOR HAS INCREASED PRODUCTIVITY -- Leningradskaya Pravda, 7 Feb 51

In 1950, the Leningrad Excavator Plant, assisted by the Scientific-Research Institute for Construction- and Road-Machine Building built an experimental model of a new excavator. The new machine has a 25-percent higher productivity than existing models. Series production of the machine will begin this year.

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